

# MARTLET MI-2

LONG ENDURANCE MINI UAS

**HEIGHT**  
TECHNOLOGIES



DATASHEET





# ACTION AERIAL INTELLIGENCE

The MI-2 is a portable long endurance multirotor, ideal for monitoring high-risk situations where decisions need to be made quickly. The system is designed to make minimal noise for covert day and night observation.

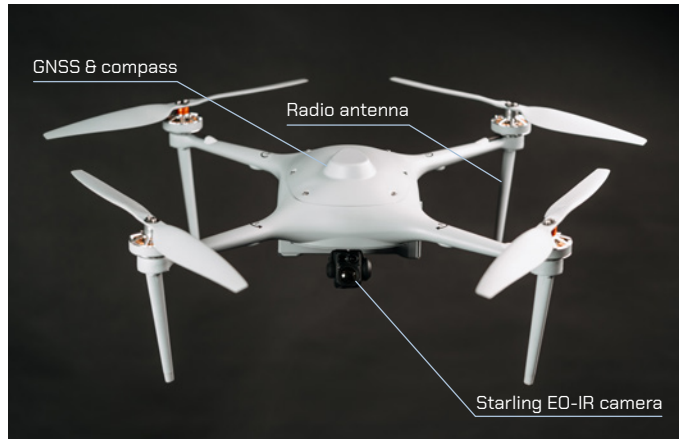
The frame and propellers of the Martlet MI-2 are all built with aviation-grade carbon composite, kevlar, and glass fiber materials - because every 1% counts..

# AIRCRAFT OPERATING ENVELOPE

| FORM FACTOR         | L    | W  | H  |       |
|---------------------|------|----|----|-------|
| Frame size          | 40   | 40 | 15 | cm    |
| Propeller size      | 17   |    |    | inch  |
| Empty weight        | 1600 |    |    | grams |
| Weight with battery | 2995 |    |    | grams |
| Max take-off weight | 3995 |    |    | grams |

## ENVIRONMENT

|                         |           |    |
|-------------------------|-----------|----|
| Operational temperature | -20 – +50 | °C |
| Precipitation           | IP54      |    |



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## SPEED

|                |     |       |
|----------------|-----|-------|
| Max wind speed | 25  | knots |
| Max airspeed   | 35  | knots |
| Max speed      | 18  | m/s   |
| Cruising speed | 10  | m/s   |
| Ascent speed   | 3.5 | m/s   |
| Descent speed  | 3   | m/s   |

## ENDURANCE MAX & WITH PAYLOADS

|                            |    |     |
|----------------------------|----|-----|
| Max flight time            | 85 | min |
| DragonEye / X80 / Starling | 80 | min |
| NightHawk-UZ               | 75 | min |

## PERFORMANCE & RANGE

|                            |      |       |
|----------------------------|------|-------|
| Covert distance (sound)    | 150* | meter |
| Typical deployment time    | < 2  | min   |
| Typical radio range (RLoS) | 10   | km    |
| Theoretical range          | 100  | km    |

\* At 120m AGL

## ALTITUDE LIMITS

|      |      |       |
|------|------|-------|
| AMSL | 3500 | meter |
| AGL  | 500  | meter |

# MARTLET GROUND CONTROL STATION

## GENERAL SPECIFICATIONS

|            |                                                                                                                                                                                              |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System     | <ul style="list-style-type: none"> <li>• Intel® Tiger Lake i5-1145G7E</li> <li>• 8GB LPDDR4x RAM</li> <li>• 64 to 512GB M.2 2242 SSD storage</li> <li>• USB 3.1 type C ports (x2)</li> </ul> |
| Durability | <ul style="list-style-type: none"> <li>• IP65, MIL-STD-810H and MIL-STD-461G certified</li> </ul>                                                                                            |
| Display    | <ul style="list-style-type: none"> <li>• 8”(1280 x 800) TFT LCD 1000 nits</li> <li>• Stealth and night mode</li> <li>• Glove touch</li> <li>• Gorilla Glass 3</li> </ul>                     |
| Battery    | <ul style="list-style-type: none"> <li>• 10.8V, 4800mAh (51.8Wh)</li> <li>• Support fast charging</li> <li>• 3 hours endurance</li> </ul>                                                    |
| Charger    | <ul style="list-style-type: none"> <li>• USB-C adapter</li> <li>• 65W, 100-240V AC, 50/60Hz</li> </ul>                                                                                       |

## MARTLET GCS

The ground control station (GCS) is a portable unit equipped with MIL-STD components, built for one person operations in all weather conditions. The Martlet GCS is designed for maximum comfort, durability and effectiveness and is interoperable on all Martlet UAV systems. All flight critical functions are reachable by MIL-STD joysticks, switches and buttons. Named Areas of Interest, waypoints and search & rescue flight patterns are easily created during flight.

## DATALINK SPECIFICATIONS

|                           |                            |     |
|---------------------------|----------------------------|-----|
| Encryption                | AES256 / AES128            | bit |
| Frequency range           | 2025 – 2500 (+5000 – 5200) | MHz |
| Max transmitting power    | 500                        | mW  |
| Max transmitting distance | 15                         | km  |
| Latency                   | 0.1                        | sec |

## HT-SDR DATALINK MODULE

As standard\*, the Martlet sUAS are equipped with the in-house developed software defined digital datalink has the ability to use a predefined custom encryption-key, to automatically “hop” between frequencies and to operate in a wide range of user-definable NATO harmonized frequency ranges:

2.0 – 2.5 GHz + 5.0 – 5.2 GHz (OPTIONAL)

\* More radio options on request



Martlet MI-2 Datasheet v7

## MARTLET SOFTWARE CAPABILITIES

### TARGET ACQUISITION / POINTS OF INTEREST

The software shows the real-time camera footprint on the map, calculates the location of the CAM-footprint and POI in UTM, MGRS and GEO coordinates and can measure various distances that could be valuable to the men on the ground. It enables operators and first responders to maximise situational awareness through advanced aerial intelligence. The Martlet GCS software can load multiple custom (military) maps, giving operators better access to more actionable intelligence when interpreting their live video feed with one of their preloaded maps.

### GNSS-DENIED FLIGHTS / DEAD RECKONING

In case of loss of GNSS/GPS or during a jamming or spoofing attack, the system automatically initiates Dead Reckoning Mode, enabling it to fly in GNSS-denied areas.

### BINGO FOR MAXIMAL FOCUS

The pilot has a perfect overview of all important indicators for a safe flight. The Bingo parameter calculated the remaining mission time (time remaining before the UAV needs to go back to the home-point). This allows the pilot to fully focus on the mission. The system always ensures a timely flight back to the desired landing location.



## MI-2 PAYLOAD OPTIONS

### MICRO STABILIZED GIMBALED CAMERAS

The MI-2 can be equipped with a wide range of dual EO/IR sensors, leaders in micro-stabilised gimbal mounted cameras. Built for long-range observation, the dual EO/IR and EO-only payloads offer HD image quality and unmatched X40- or X80-fold zoom to capture detailed images such as number plates and faces.

### GEOLOCATION

The POI function captures the position of the camera, and its line of sight, and extracts the location of observed objects with < 5 meter accuracy to enhance real-time intelligence.

### NIGHTHAWK-UZ

|                 |                                 |
|-----------------|---------------------------------|
| EO resolution   | 1280 x 720 px                   |
| EO zoom         | x20 + x2 (total x40) continuous |
| EO HFOV         | 60° WFOV – 3° NFOV – 1.5° DFOV  |
| LWIR resolution | 1280 x 720 px                   |
| LWIR zoom       | x4 continuous                   |
| LWIR HFOV       | 25° WFOV – 6° DFOV              |

Multi payload option available with the quick-release module.  
Compatible payloads are listed on the next page (7).



## MI-2 PAYLOAD OPTIONS



### DRAGONEYE

|                 |                                 |
|-----------------|---------------------------------|
| EO resolution   | 1280 x 720 px                   |
| EO zoom         | x20 + x2 (total x40) continuous |
| EO HFOV         | 60° WFOV – 3° NFOV – 1.5° DFOV  |
| LWIR resolution | 640 x 480 px                    |
| LWIR zoom       | x4 continuous                   |
| LWIR HFOV       | 32° W.FOV – 8° DFOV             |



### STARLING

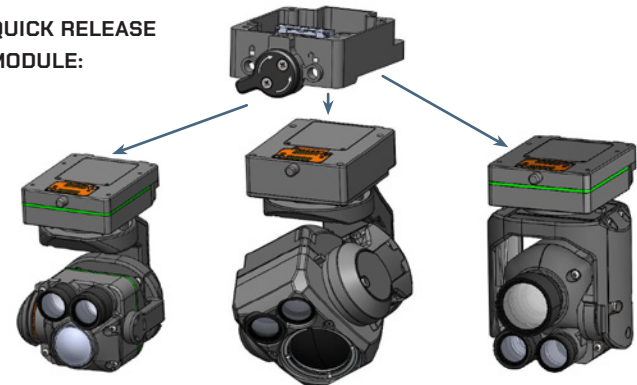
|                 |                                 |
|-----------------|---------------------------------|
| EO resolution   | 1280 x 720 px                   |
| EO zoom         | x20 + x2 (total x40) continuous |
| EO HFOV         | 60° WFOV – 3° NFOV – 1.5° DFOV  |
| LWIR resolution | 640 x 480 px                    |
| LWIR zoom       | x4 continuous                   |
| LWIR HFOV       | 18° WFOV – 4.5° DFOV            |



### X80

|               |                                   |
|---------------|-----------------------------------|
| EO resolution | 1280 x 720 px                     |
| EO zoom       | x40 + x2 (total x80) continuous   |
| EO HFOV       | 60° WFOV – 1.5° NFOV – 0.75° DFOV |

### QUICK RELEASE MODULE:



## MARTLET MI-2 | SYSTEM CONTENT

### TROLLEY TRANSPORT CASE



### IN THE CASE

- Martlet MI-2 UAV system
- Martlet 18.5" propeller set
- Martlet Ground Control Station
- Tripod for Martlet Ground Control Station
- 2x Flight batteries (18000 mAh | 22.2 V)
- UN3840 certified flight battery case (fits 2x flight batteries)
- Battery charger kit
- Toolbox





## MARTLET MI-2 | MADE FOR ISTAR

HEIGHT TECHNOLOGIES | SEE WITHOUT BEING SEEN 



CLASS-I MINI UAS  
MADE FOR ISTAR OPERATIONS

**HEIGHT**  
TECHNOLOGIES

SEE WITHOUT  
BEING SEEN



Pictured here is the Martlet MI-2S

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